

Multilux High Bay Bus DALI Master

Powerful DALI multisensor for motion and brightness detection, with autonomous control for direct luminaire management.
Product reference: ML.082002-003

Multilux High Bay Bus DALI Master is a multisensor for lighting control that includes a motion detector to cover large areas in large logistics warehouses and a brightness sensor to control and regulate lighting in installations with DALI luminaires.

The equipment is designed to carry out direct control of the luminaires, without the need to add additional elements such as DALI controllers and it is possible to add other Slave type multisensors on the bus, to expand the detection coverage area.

The product can be reconfigured to work in slave mode and become part of a network with centralised control, for installations where an investment is to be made in two phases: a first phase of multisensor installation, and a second phase of installation of a centralised control.

Main features

- Master equipment that performs a direct on/off/regulation control.
- Possibility of configuring the equipment in Master or Slave mode.
- Expansion of the detection coverage range by installing slave-type multisensors on the bus.
- Potentiometers for adjusting off time, light setpoint, minimum light level, detection sensitivity.
- Detection up to 14 m high.
- Detection coverage range 22 m in diameter.

Functional description

Introduction

The equipment includes all the necessary functions to carry out a direct control of on, off and regulation of the brightness of the installation. There must be a single Master type detector on the communication bus and as many slave type multisensors as desired can be added. A red LED indicator on the equipment turns on whenever movement is detected. The indicator is also used to signal various configuration functions.

Function description

The equipment automatically turns on the luminaires when a movement is detected in its coverage area and they turn off after the time defined in the "Output active" potentiometer since the last valid detection.

The equipment adjusts the brightness of the light fittings according to the value set in the "Lux" brightness setpoint potentiometer.

Using the "Min level" potentiometer it is possible to set a minimum brightness level of the luminaires.

Equipment setup

The equipment can be configured via the potentiometers and the pushbutton or via the DALI bus with the help of a DALI interface and the E-Controls "EConfig DALI" software.

It is possible to configure different functions using the potentiometers. ATTENTION: Power the equipment before making any adjustments. Each time a potentiometer is moved, the red LED indicator flashes rapidly, indicating that its value is being modified. After 3 seconds without moving the potentiometer, the LED indicator lights up momentarily and the adjusted value is saved.

IMPORTANT NOTE: Adjust the potentiometers with powered equipment, otherwise the adjustments will have no effect on the equipment.

The operation of each potentiometer is detailed below:

EN

Instructions sheet



- Motion detection status LED indicator.
- Brightness sensor with range up to 500 lux.
- Power supply through the DALI bus.
- Bootloader for loading software versions via the DALI bus.
- Possibility of configuring the equipment through the DALI bus.
- IP 65 protection rating.
- Operating temperature from -20°C to +50 °C.

- **Detection:** Adjusts the sensitivity of the motion detector.
 - **Output active:** Adjusts the off time of the luminaires. In the ON position, the luminaires never turn off and the equipment only works as a brightness adjustment sensor.
 - **Lux:** Adjusts the light setpoint that is desired for the luminaires. Read the section on configuring the brightness setpoint setting to correctly adjust the equipment.
 - **Min level:** Sets the minimum level of light desired. With the potentiometer at the minimum level, the luminaires will turn off.
- Operation of the "Config" button:
- **Short press:** Press less than 2 seconds to turn on the lights.
 - **Long press:** Press for 2 to 5 seconds to enable/disable the motion detection LED indicator. The LED indicator is enabled at the factory.
 - **Super long press:** Press for more than 5 seconds and release to change the equipment from Master mode to Slave mode and vice versa. In Slave mode, the LED flashes 5 times in 3 seconds. In Master mode, the LED lights up for 3 seconds.

Setting the desired light setpoint

Use a calibrated lux meter to measure the desired light level. Make adjustments to the brightness setpoint at night.

Move the "Lux" potentiometer until the desired light level is achieved. At the beginning of the process, the LED indicator will begin to flash and each time the potentiometer is moved, the light intensity of the luminaires will vary.

Once adjusted, it is essential to close the cover of the equipment and separate as much as possible from the equipment so that it acquires the correct measure of light. The light level is automatically recorded after 2 minutes and the LED flashes rapidly indicating the end of the process.

The calibration process can also be carried out through the DALI bus in the "online" installation itself or in the "offline" offices without having to be at the facility. This second case is useful when you want to send the already calibrated sensors to the installation.

Product installation

Important

- Follow the DALI standard recommendations for wiring installation.
- Avoid reflections of sunlight that directly affect the equipment. Avoid shiny shelves and floors where sunlight is reflected.
- Mount the equipment on a flat and firm surface to avoid vibrations.

Installation process

1. Disconnect the power supply from the DALI bus to be connected to the equipment.
2. Unscrew the four screws on the multisensor cover.
3. Connect the DALI cable to the equipment. The DALI bus has no polarity.
4. Screw in the thread of the cable gland to fix the hose.
5. Screw the equipment firmly to the ceiling.

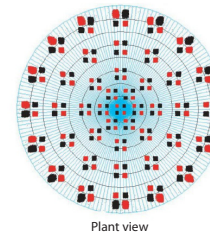
Motion sensor

Detection coverage table (*)

Height (m)	Diameter (m)
5	10
6	11
8	13
10	16
12	19
14	22

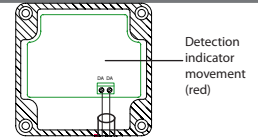
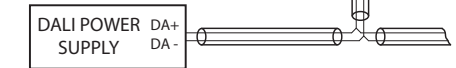
(*) In optimal conditions of sensitivity

Detection diagram



Installation diagram

DALI cable
2x1.5 mm²
Dist. max. 300 m



Technical Features

Power supply

Operating voltage 16 Vcc ± 30%
Maximum nominal current 4.6 mA
NOTE: Use a DALI power supply to power the equipment.

Communications

Technology DALI
Standard IEC 62386
Interface DALI
Transmission speed 1200 bps

Motion sensor

Technology PIR (Passive Infrared)
Number of detection zones 43
Detection surface 360°
Detection range See table
Maximum detection height 14 metres
Detection sensitivity adjustment Potentiometer
Average stabilization time after reset 90 s

Brightness sensor

Sensor measurement range 0 to 500 lux
Resolution 12 bits
Spectral bandwidth 400 to 800 nm
Maximum sensitivity wavelength 570nm

Configuration Potentiometers

Detection (detection sensitivity). Between 1 and 15
Output active (time off) From 1 to 60 minutes
• From 1 to 9 minutes 5 Values: 1, 3, 5, 7, 9
• From 10 to 60 minutes. 11 Values: 10, 15, 20, 25 ..., 55, 60
• ON position. Lux sensor only
Lux (brightness setpoint) 0 to 500 lux
Min level (minimum lux level) 0 to 500 lux

Config button

Short/long/super long press LED indicator/Settings

Front LED Indicator

Motion detection/Settings On red
Wink DALI Command (*) Red blink 30 s

DALI network commissioning (*)

Unique identifier when discovering devices

Product reference

Multilux High Bay Bus DALI Master, Powerful motion and brightness detector, DALI Master ML.082002-003

The packaging of this product is considered an industrial container, with the recipient being a professional.
The manufacturer is not responsible for the incorrect use or installation of the product.
Document subject to changes without prior notice.